

1886 f40

By Her Majesty's



Royal Letters Patent.

EAGLE FIRE GRATE

SLOW, MODERATE, OR FAST COMBUSTION, AS REQUIRED.

AWARDED THE FIRST PRIZE

BY THE

Society of Architects; Sheffield Exhibition, 1886.

THIS ILLUSTRATION SHOWS THE GRATE ENTIRELY CLOSED.

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GOLD MEDAL AWARDED, GLASGOW EXHIBITION, 1886.

SPECIAL ADVANTAGES:

FAST OR SLOW COMBUSTION.

BURNS FOURTEEN HOURS WITHOUT ATTENTION.

ENORMOUS ECONOMY IN FUEL.

FIRE CAN BE LIT AND A GOOD HEAT ESTABLISHED
IN A FEW MINUTES.

CERTAIN CURE FOR SMOKY CHIMNEYS.

TEMPERATURE OF ROOM CAN BE INCREASED OR
DECREASED AS DESIRED.

PERFECT SAFETY.



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THIS Fire Grate is constructed for warming by radiation only, this method being the most congenial and conducive to health.

Radiant or direct heat has the peculiar advantage and property of heating surrounding objects in a room, such as the walls, furniture, &c., to a comparatively high degree without materially increasing the temperature of the air, thus giving a sense of comfort unattainable from stoves, hot water pipes, &c.; these heat the air first, and give a sense of closeness and oppression. In this grate is embodied the Improvements advocated by Captain Galton, Dr. Teale, and other eminent authorities, viz., the over-hanging Back Brick, the "Economiser" front, &c., &c., in addition to which the grate admits of the most perfect regulation and other important advantages explained under the several illustrations.

The fire bars of the grate are of improved form, being made thin at the front, but of very strong section, the three bars together obstructing but $1\frac{1}{4}$ inch of the fire surface, in addition to which, instead of lying flat, they slope inwards, thus making it an impossibility for a cinder to fall out from the fire, and, what is most important, this arrangement of the bars allows nearly the whole of the fire front to be seen, an impossibility with the ordinary form of bars, which obstruct nearly half of the front fire surface.

It will be seen from the illustrations that the front fire bars project into the room, thereby increasing the fire surface nearly one half over the flat front, and more equally diffusing the radiant rays of heat.

If this grate is arranged as at illustration E the fire will burn from 12 to 16 hours without attention, so that, if desirable, the fire can be kept burning continuously night and day without re-lighting.

There are other minor improvements which, however, may be of importance to many, therefore we beg the favour of a visit of inspection to our Show-rooms, where a grate can always be seen in action and the whole will be fully explained.

The following illustrations will explain the advantages of the movable doors or regulators, and the prices, sizes, &c., will be found at the end of the Catalogue.



THE EAGLE FIRE GRATE.

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A

THE above illustration A shows the grate with all the doors or regulators closed. The mode of opening or closing these is very simple, and quite impossible for them to get out of order. The tiled side panels are pivoted at the front edge, and when it is required to alter the arrangement of the doors or regulators these panels are opened and the doors folded back when opening the fire; to close it the operation is reversed. By opening the upper doors a little, the ventilation of the room is kept up. By opening the three doors on one side only, the side that is left closed, effectually screens that side of the room from the fire. The whole of the doors can be opened or closed in half a minute.

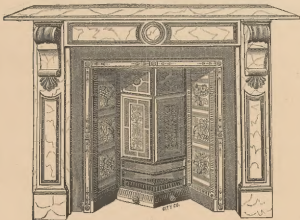
The closing of all the doors, as illustration A, is a great convenience when the fire is left at night, as it entirely prevents sparks flying out and makes danger of fire from this cause an impossibility.

In the Summer time, when the fire is not required, these doors are closed and the grate then has a neat and ornamental appearance, and, as it entirely closes up the chimney, all smell of soot, &c., is kept from the room.



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B

THE above illustration B shows the grate with the two upper pairs of doors closed and the lower ones open. This creates a rapid draught, and causes the fire to burn very briskly, it is the same result that is brought about by the too common and dangerous practice of holding a newspaper across the opening of an ordinary grate.

The important advantage of being able to draw the fire up rapidly is obvious to everyone; it is of especial convenience when lighting the fire in the morning or in drawing up the fire when very low or almost out, also when the chimney has a tendency to smoke with certain winds. In the majority of cases chimneys do not smoke when once thoroughly warmed, but with the ordinary Register, or Dog Grate, it is impossible to do this for some hours, as so much cold air enters the chimney without coming in contact with the fire, but in our grate with the doors arranged as above illustration no air passes into the chimney without first going through the fire. This soon heats the chimney, after which the doors, or regulators, may be opened without any liability of the chimney smoking.

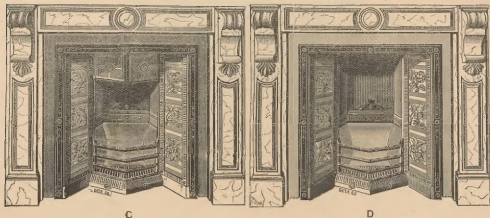
The above arrangement is important in greatly assisting the abatement of the "Smoke Nuisance." With the ordinary grate, for the first half hour after lighting the fire or after being fed with fresh fuel, volumes of smoke are poured into the chimney, fouling it with soot rapidly. This is an enormous waste, as smoke and soot are simply unconsumed fuel; with our grate, as before explained, the air having passed through the fire, and thereby become heated before mingling with the gases and smoke, makes them combustible and immediately causes them to ignite and flame.

This arrangement is also very useful when hard fuels such as anthracite, coke, or bad coal are only obtainable, as the rapid draught causes them to light easily and their objectionable qualities are then overcome.



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THE above illustration C shows the grate, with the upper doors closed only. This arrangement is convenient when the draught in the chimney is sluggish, as these doors deflect the current of air and cause it to pass nearer to the fire, making the combustion a little more rapid than when the grate is entirely open, as shown in illustration D.

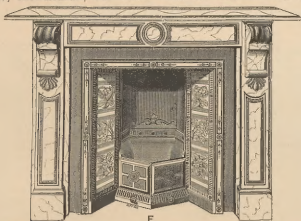
THE above illustration D shows the grate entirely open, having no canopy or hood, as with ordinary grates, to obstruct the free radiation of heat from the flame and the upper parts of the back and sides of the grate. This is the most perfect form of fireplace, radiating a greater amount of heat for a given quantity of fuel than any other type of existing grate; but it has the disadvantage of being very sluggish in its action when first lighted, and, with many chimneys, might have a tendency to smoke until the chimney was warmed. Our regulating doors quite remedy this evil, as they are closed until the chimney is heated and the fire drawn up, after which they are folded back and the *full benefit* of the heat is felt in the room.

With the ordinary type of Register grate, the chimney draws its supply of air from about 12 or 15 inches above the floor; this has the effect of keeping the lower part of the room cold. With our grate the supply of air is drawn more equally from all parts of the room, and is therefore much more efficient as a ventilator, and maintains a regular temperature.



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E

THE above illustration E shows the grate with the bottom doors closed only, the two upper pairs being folded back. This arrangement prevents the air coming in contact with the fuel; the combustion is almost stopped, and the fire simply smoulders; so that it can be left quite safe, and **will keep alight from 12 to 16 hours without attention**; at any moment, by reversing the arrangement of doors, a bright fire is obtainable at once. This is of especial convenience in a case of sickness, or in the many instances where it is necessary to keep the room at an equable temperature during the night and early morning.

In the previous description we have shown that we have succeeded in making a simple and efficient grate which can at any moment be changed from a very fast to an extremely Slow Combustion Stove, or can be used in any condition desirable between these two extremes. Numbers of Slow Combustion Grates have been introduced during the last eight years; which have been fairly successful when fixed in chimneys with a keen draught, but have been in most cases an utter failure in sluggish chimneys or where there is a tendency to smoke; from the fact that they are always and under all conditions *Slow Combustion Stoves*. This is a great disadvantage, as it will be readily understood that only after the fire is established and the room heated that its *slowness* is desirable. This inconvenience is especially felt for the first two or three hours in the morning.

Many people advocate and prefer the fire brick slab instead of the grating at the bottom of the fire box; any of our grates can be fitted with a fire brick bottom if so desired, but we consider that our arrangement is much more cleanly and economical. We fit a narrow bottom grating with very close bars, and to prevent the constant ingress of air through it and the consequent rapid combustion, we make the ash pan front so that it fits tightly up against the lower edge of the front bars, thus making the chamber under the fire grate nearly air tight. This is the system so strongly recommended by Dr. FRIDGEN TEALE, and a twelve months' trial of our grates in all parts of the Kingdom, and with all kinds of fuel, have proved this system to be most satisfactory, as even with bad fuel the combustion has been so perfect that after 12 and 14 hours burning only a small quantity of fine ash has been found in the pan.

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TESTIMONIALS.

From Sir JOHN SINCLAIR,
Barrock House, Wick, N.B.,
October 12th, 1886.

Sir JOHN SINCLAIR incloses cheque for account due, and Sir JOHN considers it the best grate he has ever seen and wishes he could arrange to have more of them in his house.

From the Rev. J. HERBERT CRUMP,
Holy Trinity Vicarage,
Southwick, Birmingham.

I have the pleasure to inclose you cheque. I have had the grate fixed and it answers admirably, having successfully solved the smoky chimney problem. I am inclined to put one in my drawing room if you can make it to fit present opening.

From Major J. E. W. HOWEY,
Coteshill House, Amersham, Bucks,
February 15th, 1886.

I am very pleased indeed with your grate, and I shall, probably, require two or three more shortly. I consider them perfection.

From Messrs. YARROW & Co.,
Torpedo Boat Builders,
Poplar, London.

Your men have completed the stove and it works very satisfactorily; kindly send invoice.

PRICES.

- | | | |
|---|---|----------|
| <p>No. 1.—Fine Finish, Ground, Buffed, and Berlin Blacked, with Ornamental Mouldings relieved in Gold, Ormolu Knobs and Loose Ashes Pan; 3 ft. wide by 3 ft. 2 in. high; 3 ft. 2 in. wide by 3 ft. 2 in. high; 3 ft. 4 in. wide by 3 ft. 2 in. high. These are standard sizes kept in stock, but they can be made any size to suit the mantel piece. See foot note. Price, without Tiles,</p> | } | £6 10 0 |
| <p>No. 2.—Best Finish, Ground, Buffed, and Berlin Blacked, with Bold Reeded Brass Moulding and Corner Blocks, Ormolu Knobs and Loose Ashes Pan; 3 ft. wide by 3 ft. 2 in. high; 3 ft. 2 in. wide by 3 ft. 2 in. high; 3 ft. 4 in. wide by 3 ft. 2 in. high. These are standard sizes kept in stock, but can be made any size to suit the mantel piece. See foot note. Price, without Tiles,</p> | } | £8 0 0 |
| <p>No. 3.—Best Finish, Ground, Buffed, and Berlin Blacked, with Bold Reeded Brass Moulding and Corner Blocks, Electro-Bronzed Ornamental Side Panels and Frames, and Electro-Bronzed Centre Panels in Regulating Doors, Ormolu Knobs and Loose Ashes Pan; 3 ft. wide by 3 ft. 2 in. high; 3 ft. 2 in. wide by 3 ft. 2 in. high; 3 ft. 4 in. wide by 3 ft. 2 in. high. These are standard sizes kept in stock, but can be made any size to suit the mantel piece; no Tiles required.</p> | } | £13 15 0 |
| <p>No. 4.—Best Finish, Ground, Buffed, and Berlin Blacked, with Bold Ornamental Mouldings, Ormolu Knobs and Loose Ashes Pan; 3 ft. 6 in. wide by 3 ft. 4 in. high; 3 ft. 8 in. wide by 3 ft. 4 in. high. These are standard sizes kept in stock, but can be made any size to suit the mantel piece. See foot note. Price, without Tiles,</p> | } | £10 0 0 |
| <p>No. 5.—Best Finish, Ground, Buffed, and Berlin Blacked, with Bold Ornamental Mouldings, Ormolu Berry Beading in centre of Mouldings, Ormolu Knobs and Loose Ashes Pan. Sizes as No. 4. Price, without Tiles,</p> | } | £11 10 0 |

The Side Panels of Nos. 1 and 2 are prepared for Tiles or Slabs 30 in. high by 6 in. wide by $\frac{1}{2}$ or $\frac{3}{4}$ in. thick. Nos. 4 and 5 are prepared for Tiles or Slabs 30 in. high by 8 in. wide by $\frac{1}{2}$ or $\frac{3}{4}$ in. thick. All the above prices are for the Grate prepared for Tiles, but Tiles not included. We can supply Tile Panels, by Minton and other first class makers, varying from 9/- to 60/- per pair.

Carriage Paid to any railway station in England.

SHOW ROOMS
FOR
EAGLE COOKING RANGES.
GRILLING STOVES.
WARMING STOVES.
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No Gold Medal Awarded.

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No Gold Medal Awarded.

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